Robbins, Jan

From: Hicks, Carolyn
Sent: Tuesday, December 09, 2003 2:48 PM
To: #Contact Records; Rehder, Timothy; Schuetz, Gary; Hindman, James; Kray, Edd; Carranco, John; Dieter, Thomas; Brown, Maurice; Bodkin, Tyke; Pizzuto, Victor; Robbins, Jan; Schommer, Ruth; James Hindman (E-mail)
Cc: Uetrecht, Greg; Schoen, Jim; Cathel, Bob; Baker, Thomas; Digiallonardo, Anthony
Subject: B776 RCRA Process Waste Tank Closure Contact Record

Attached is a contact record documenting CDPHE approval to manage the B776 RCRA Process Waste Tank system (Unit 776.2) as non-hazardous low level waste following closure by removal. The rinsate data summary is an attachment referenced in the Contact Record.

T Tank Closure final contact r... RCRA rinsates T Tanks.doc

At Mr. Hindman's request, this contact record has been amended since the draft version by adding a commitment to remove sludge from the piping if any is found during piping removal.

Carolyn Hicks
S.M.Stoller Corp.
Building 707/776/777 Environmental Compliance
966-5773
pager # 303-212-1763

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
REGULATORY CONTACT RECORD

Date/Time: December 9, 2003 / 1:00 p.m.

Site Contact(s): Carolyn Hicks
Phone: (303) 966-5773

Regulatory Contact: James Hindman
Phone: (303) 692-3345

Agency: CDPHE

Purpose of Contact: Request approval for management of Building 776 RCRA process waste tank system as non-hazardous waste following closure by removal.

Discussion:
The four RCRA process waste tanks in Building 776 are undergoing closure. The tank ports were opened and the sludge was removed as much as possible. The tanks were then washed and rinsed with water. The tanks were filled and sampled in pairs (T-1A/T-1B and T-2A/T-2B). The volume of final rinsate used for each pair of tanks was the minimum needed to obtain a sample from the sight gage. This rinsate was then transferred through the valve vault system, and a sample of rinsate was collected from the piping where it exits the facility in Building 778. After the rinsate was shipped, the tanks were opened and visually verified to be free of sludge. On December 9, 2003 Mr. Hindman requested that we verify that the piping is also free of sludge as the piping sections are removed. Sludge in the piping will be removed and characterized/packaged separately from the piping.

A summary of the tank and piping rinsate results is attached. The tank rinsate data was provided to Mr. Hindman on November 19, 2003 via email. Mr. Hindman responded with questions and comments on November 24, 2003, which have been addressed and included in this discussion. The piping rinsate results were subsequently received, and they are also included in the attached data summary.

All organic compounds were below the RFCA Tier II action levels or were non-detect. For some analytes that were non-detect, the detection limit was above the Tier II action level. The samples were diluted in the lab due to foaming problems, and thus the detection limit (10 parts per billion) was the best that could reasonably be measured. The tanks were generically permitted for F007 – F009 (cyanide F-listed waste codes) based on these codes applying to some tanks in the site aqueous process waste system. However, the tanks in Unit 776.2 never held these codes, so the rinsate was not sampled for cyanides. (Likewise, the tanks were permitted for EPA waste code D038, pyridine, but the tanks never managed this waste and the rinsate was not sampled for pyridine.) Mr. Hindman has agreed that with respect to the F-listed wastes the tanks were permitted for, the "no longer contained in" determination applies (also called the "contained out policy" by CDPHE).

Several metals had levels higher than the RFCA Tier II standards and/or the RCRA Universal Treatment Standards (UTS) level for one or more samples. Barium, chromium, and lead were above both standards, but below RCRA hazardous waste levels. While the rinsate did not meet clean closure standards for metals, the levels were low enough that the tanks and piping would not be characteristic hazardous waste. Therefore Mr. Hindman has agreed that the tank system can be closed by removal and managed as non-hazardous low level radioactive waste.

CDPHE will follow up with a Contained-Out Determination letter. DOE has requested that they be copied on this letter.

Contact Record Prepared by: Carolyn Hicks

Required Distribution:

M. Aguilar, USEPA
S. Bell, DOE-RFFO
B. Birk, DOE-RFFO
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J. Robbins, CERCLA A.R.
R. Schommer, 776 proj. file

RCRA Closure Rinsate Sample Results

Building 776 T-Tanks and Piping, RCRA Unit 776.2

The four RCRA process waste tanks in Building 776 are undergoing closure. The tank ports were opened and the sludge was removed as much as possible. The tanks were then washed and rinsed with water. The tanks were filled and sampled in pairs (T-1A/T-1B and T-2A/T-2B). The volume of final rinsate used for each pair of tanks was the minimum needed to obtain a sample from the sight gage. Rinsate samples were collected from T-1A and T-2A on November 11, 2003. This rinsate was then transferred through the valve vault system, and a sample of rinsate was collected from the piping where it exits the facility in Building 778. This sample was collected on November 18, 2003, in order to close the ancillary piping.

The lab sample numbers are 04C00058-001 and 04C00058-002 (Tanks T-1A and T-2A, respectively), and 04C0059-001 (Building 778 piping sample). The samples were analyzed for fingerprint, total volatiles, and total metals.

The following table is a summation of all RFCA analyte results compared to the Tier II Action Levels and to the RCRA LDR Universal Treatment Standards for characteristic wastes. Each analyte above the reference regulatory level is highlighted. Data presented with a letter following it (e.g., 0.0025 (B)) indicates that the analyte was detected but is qualified as follows:

Organic
J...estimated value above the MDL, but below the RDL.
N...indicates a presumptive identification on a tentatively identified compound (TIC)
U... Analyzed for but undetected.
Inorganic
B...Estimated value above the IDL/MDL but below the RDL
N... spike recovery not within control limits
U... Analyzed for but undetected.

Note: Where the U qualifier is reported, the detection limit is also listed, because in some cases the detection limit is above the Tier II Action Level. These cases are shown highlighted on the table.

Data Summary

All organic compounds were below the RFCA Tier II action levels or were non-detect. Therefore, with respect to the F-listed wastes the tanks were permitted for, we request that the "no longer contained in" determination applies.

Several metals had levels higher than the RFCA Tier II standards and/or the RCRA UTS level for one or more samples. Barium, chromium, and lead were above both standards, but below RCRA hazardous waste levels. While the rinsate did not meet clean closure standards for metals, the levels were low enough that we plan to close by removal, and manage the waste (the tanks and piping) as non-hazardous low level radioactive waste.

Table 1

RCRA Rinsate Results and RFCA/RCRA action levels (Units expressed as mg/L)

Analyte of Concern	RIN 04C0058 Event 1 Tank T-1A	RIN 04C0058 Event 2 Tank T-2A	RIN 04C0059 Piping in 778	RFCA Tier II Action Level	RCRA UTS (inorganic and characteristic)
pH	6.00	6.00	6		Closure std 6-9
Acetone	0.1 U	0.1 U	0.1 U	3.65	
Aluminum	16.7	8.22	9.3	36.5	
Antimony	0.0157	0.010	0.0087	.006 0.01 PQL	1.9
Arsenic	0.0118 BN	0.0071 BN	0.036	0.05	1.4
Barium	3.56	2.66	0.77	2.0	1.2
Benzene	0.01 U	0.01 U	0.01 U	0.005	0.14
Beryllium	0.0394	0.0262	0.016	0.004 0.005 PQL	0.82
Bromodichloromethane	0.01 U	0.01 U	0.01 U	0.1	
Bromoform [Tribromomethane]	0.01 U	0.01 U	0.01 U	0.01	
Bromomethane	0.01 U	0.01 U	0.01 U	0.0511	
2-Butanone [Methylethyl ketone]	0.1 U	0.1 U	0.1 U	21.9	0.28
Cadmium	0.102	0.073	0.055	0.005	0.69
Carbon disulfide	0.01 U	0.01 U	0.01 U	3.65	
Carbon tetrachloride	0.01 U	0.01 U	0.01 U	0.005	0.057
Chlorobenzene	0.01 U	0.01 U	0.01 U	0.1	0.057
Chloroethane	0.01 U	0.01 U	0.01 U	0.0294	
Chloroform [Trichloromethane]	0.016	0.0187	0.0179	0.1	0.046
Chloromethane	0.01 U	0.01 U	0.01 U	0.00655	
Chromium (total)	2.96	1.47	1.50	0.1	2.77
Cobalt	0.069	0.045	0.051	2.19	
Copper	1.35	0.82	0.65	1.3	
Dibromochloromethane	0.01 U	0.01 U	0.01 U	0.00101	
1,2-Dibromo-3-chloropropane	0.01 U	0.01 U	0.01 U	0.0002	
1,2-Dichlorobenzene	0.01 U	0.01 U	0.01 U	0.6	
1,3-Dichlorobenzene	0.01 U	0.01 U	0.01 U	0.6	
1,4-Dichlorobenzene	0.01 U	0.01 U	0.01 U	0.075	0.090
1,1-Dichloroethane	0.01 U	0.01 U	0.01 U	3.65	
1,2-Dichloroethane	0.01 U	0.01 U	0.01 U	0.005	0.21
1,1-Dichloroethene	0.01 U	0.01 U	0.01 U	0.007	0.025
1,2-Dichloroethene (total)	0.01 U	0.01 U	0.01 U	0.07	
1,2-Dichloropropane	0.01 U	0.01 U	0.01 U	0.005	
cis-1,3-Dichloropropene	0.01 U	0.01 U	0.01 U	0.000473 0.001 PQL	
trans-1,3-Dichloropropene	0.01 U	0.01 U	0.01 U	0.000473 0.001 PQL	
Ethylbenzene	0.01 U	0.01 U	0.01 U	0.7	
Hexachlorobutadiene	0.01 U	0.01 U	0.01 U	0.00109	0.055
Lead (dissolved)**(run as totals)**	1.7	1.08	0.89	0.0150	0.69
Lithium	15.1	8.18	23.0	0.7	
Manganese	1.08	0.728	0.67	1.72	
Mercury	0.00067	0.0023	0.004	0.002	0.15
Methylene chloride (Dichloromethane)	0.01 U	0.01 U	0.01 U	0.005	

Analyte of Concern	RIN 04C0058 Event 1 Tank T-1A	RIN 04C0058 Event 2 Tank T-2A	RIN 04C0059 Piping in 778	RFCA Tier II Action Level	RCRA UTS (inorganic and characteristic)
4-Methyl-2-pentanone (MIBK)	0.1 U	0.1 U	0.1 U	2.92	
Molybdenum	0.111	0.0839	0.099	0.183	
Naphthalene	0.01 U	0.01 U	0.004 J	1.46	
Nickel	0.236	0.158	0.15	0.140	3.98
Selenium	0.0011 B	0.00086 B	0.018	0.05	0.82
Silver	0.0421 N	0.0575 N	0.15	0.183	0.43
Strontium	0.314	0.229	0.17	21.9	
Stryene	0.01 U	0.002 J	0.005 J	0.1	
1,1,2,2-Tetrachloroethane	0.01 U	0.01 U	0.01 U	0.000426 0.001 PQL	
Tetrachloroethene	0.01 U	0.01 U	0.01 U	0.005	0.056
Thallium	0.00058 B	0.00045 B	0.017	0.002 0.012 PQL	1.4
Tin	0.0755 B	0.0596 B	0.049 B	21.9	
Toluene	0.006 J	0.007 J	0.008 J	1.0	
1,2,4-Trichlorobenzene	0.01 U	0.01 U	0.01 U	0.07	
1,1,1-Trichloroethane	0.01 U	0.01 U	0.01 U	0.2	
1,1,2-Trichloroethane	0.01 U	0.01 U	0.01 U	0.005	
Trichloroethene	0.01 U	0.01 U	0.01 U	0.005	0.054
Vanadium	0.0239 B	0.0151 B	0.01 B	0.256	4.3
Vinyl chloride	0.01 U	0.01 U	0.01 U	0.002	0.27
Xylene (total)	0.009 J	0.007 J	0.0103	10.0	
Zinc	78.8	46.5	53.0	11.0	